

REMARKS

The Examiner is thanked for the due consideration given the application.

Claims 1-19 are pending in the application. Support for the amendments to claims 1 and 10 find support in the specification at page 17, lines 5-11; at page 14, lines 8-12; and on page 5, line 37 to page 6, line 1. Furthermore, claim 10 has been amended in order to render it more clear. Indeed, an emulsion is, by definition, a mixture of at least two liquids (and not of at least one liquid as it was previously mentioned) considered to be immiscible, that is to say a mixture of a dispersed phase (40) with a dispersing phase (44). claims 9 and 13 have been amended in order to limit the object of these claims to a method for making an emulsion and claims 11 and 12 have been amended to render them more clear (the term "fluid 40" has been replaced by "dispersed phase 40" and the term "another fluid 44" has been replaced by the "dispersing phase 44"). Claims 2-8, 11, 12 and 14-19 have been amended to improve their language in a non-narrowing fashion.

No new matter is believed to be added to the application by this amendment.

Election/Restriction

The Official Action has restricted the claims of the application into the following groups:

Group I, claims 1-9, drawn to a method of making a dispersion or emulsion; and

Group II, claims 10-19, drawn to a device for making a dispersion or emulsion.

Group I, claims 1-9, is elected with traverse.

The Official Action has additionally restricted the present invention into the following species:

Species (1), vibration by excitation of a mechanical type;

Species (2), vibration by excitation of an electrical type;

and

Species (3), vibration by excitation of a magnetic type.

Species (1), vibration by excitation of a mechanical type, is elected with traverse.

As is set forth in MPEP 803, there are two criteria for a proper requirement for restriction between patentably distinct inventions:

(A) The inventions must be independent or distinct as claimed; ***and***

(B) There would be a serious burden on the examiner if restriction is not required.

In this case the technologies of the emulsification method of Group I and the emulsifying device of Group II are so

intimately interrelated that no undue burden is placed upon the Examiner to examine all the groups and species) on the merits.

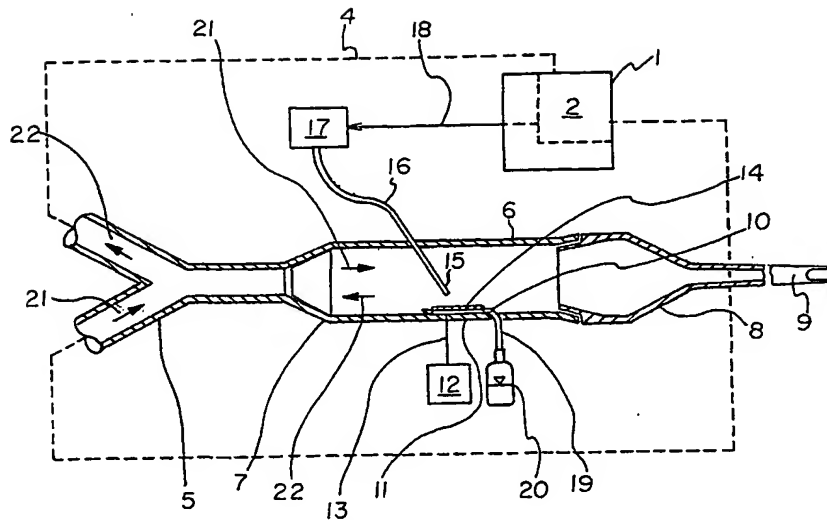
As evidence thereof, it is noted that the Official Action has cited the prior art references of KOCH et al. (U.S. Patent 5,443,059) and MICHAELS et al. (U.S. Patent 3,812,854) to assert that Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT rule 13.2, they lack the same of corresponding special technical features, where "special technical features" is defined to mean those technical features that define a contribution over the prior art.

By this, the Office has already performed consideration and/or search based upon the prior art. There is thus clearly no additional undue burden to continue to examine the entire present invention on the merits.

Further, the Official Action asserts that the present invention fails to make a contribution over KOCH et al. and MICHAELS et al. in order to support the assertion of non-unity of invention. However, the present invention sets forth technology that is clearly patentable over these references for at least the reasons set forth below.

KOCH et al.

KOCH et al. describe a device for generating an aerosol in the course of a respiration gas line, which leads from a respirator to a patient for the patient's artificial respiration. The Figure of KOCH et al. is reproduced below.



This device of KOCH et al. includes a respiration gas line 6, which carries a tray 10 in which a piezoceramic 11 is accommodated. The piezoceramic 11 is connected to an ultrasound signal generator 12 and is provided with a vibrating surface 14. The device also includes a metering unit 17 which delivers a small amount of liquid from an integrated reservoir into a metering line 16. The liquid is then distributed onto the vibrating surface 14, which is induced to perform vibrations for atomization into very fine aerosol droplets during the inspiration as a consequence of the ultrasonic vibrations. Thus, the respiration gas is delivered to the patient by the respiration gas flow together with the atomized liquid.

KOCH et al. thus fail to pertain to a method for making an emulsion of one liquid (dispersed phase) which is immiscible in another liquid (the dispersing phase). Indeed, this document concerns the dispersion of liquid in a gas (atomization). In

particular, the aim of Koch is to atomize a small amount of liquid (column 2, lines 5-24). Hence, KOCH et al. fail to remedy to problems linked with emulsion as, for example, to obtain a homogeneous emulsion with fine drops with few energy.

KOCH et al. is thus non-analogous art.

Moreover, even if this document is taken into consideration, KOCH et al. fail to disclose or suggest a method for making an emulsion, and in particular a method for making an emulsion from at least two liquids considered to be immiscible. In addition, KOCH et al. make no disclosure of a dispersed phase which is forced through a porous body into a dispersing phase. Indeed, the liquid in KOCH et al. is distributed by the metering line 16 onto the vibrating surface 14 where it is atomized (column 4, lines 14-21 of KOCH et al.), but in no way is there a disclosure of the liquid being forced through the vibrating surface 14 into the dispersing phase (air). Finally, there is no disclosure that the porous body has a better affinity with the dispersing phase than with the dispersed phase.

Therefore, claim 1 is clearly patentable over KOCH et al., and this reference fails to provide evidence a failing to define a contribution over the prior art.

In addition, KOCH et al. fail to disclose or suggest a device for making an emulsion, and in particular a device for making an emulsion from at least two liquids. Furthermore, KOCH et al. describe neither a porous body having a porous part

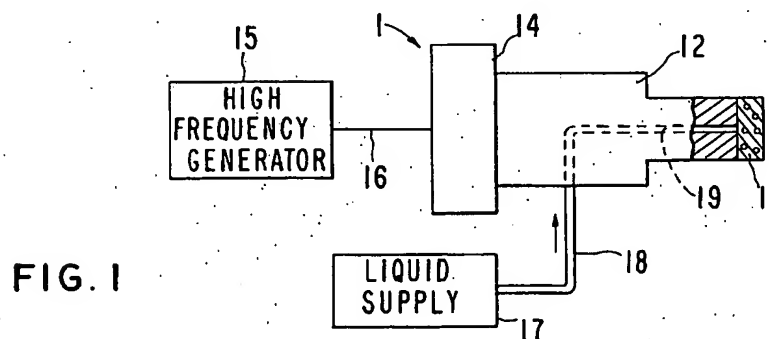
through which a dispersed phase can be forced, nor a porous body having a co-called internal cavity.

Also, KOCH et al. fail to describe a case (23) which surrounds at least the porous part or the vibrating surface in a leaktight fashion so as to define a so-called external cavity into which said porous part opens, it being possible to convey the dispersed phase into said external cavity. Finally, KOCH et al. fail to disclose a porous body having a better affinity with the dispersing phase than with the dispersed phase.

Hence, claim 10 is patentable KOCH et al., and this reference fails to provide evidence a failing to define a contribution over the prior art.

MICHAELS et al.

MICHAELS et al. pertain to a device for ultrasonically producing liquid aerosols having controlled particle sizes for inhalation therapy. Figure 1 of MICHAELS et al. is reproduced below.



The device of MICHAELS et al. is a nebulizer that includes a porous body having a defined intercommunicating pore structure,

an oscillator capable of vibrating the porous body at an ultrasonic frequency and a system for supplying liquid to be nebulized to the pores of the porous body. Column lines 62-65 of MICHAELS et al. discusses that "viscous liquids, such as oils, generally are not suitable for nebulization with the present apparatus as they tend to clog the porous body". MICHAELS et al. thus teach away from the present invention.

So, similarly to KOCH et al., MICHAELS et al. fail to pertain to a method for making an emulsion of one liquid (dispersed phase) which is immiscible in another liquid (the dispersing phase). Indeed, this document is concerned with the dispersion of liquid in a gas by breaking the liquid in particles (nebulization). Here again, MICHAELS et al. fail to remedy to problems linked with emulsion as, for example, obtaining a homogeneous emulsion with fine drops with a low energy expenditure.

MICHAELS et al. is thus non-analogous art.

Moreover, even if MICHAELS et al. is taken in consideration, MICHAELS et al. fail to disclose a method for making an emulsion, and in particular a method for making an emulsion from at least two liquids considered to be immiscible. Finally, MICHAELS et al. fail to describe that the porous body has a better affinity with the dispersing phase than with the dispersed phase. In contrast, Michaels cites that "the material of construction of

the porous body is not critical so long as it provides a fixed pore size" (column, lines 41-43).

Therefore, claim 1 of the present invention is patentable over MICHAELS et al., and this reference fails to provide evidence a failing to define a contribution over the prior art.

In addition, MICHAELS et al. fail to disclose or suggest a device for making an emulsion, and in particular a device for making an emulsion from at least two liquids. Furthermore, there is no description of a porous body having a co-called internal cavity. Finally, MICHAELS et al. fail to disclose a porous body having a better affinity with the dispersing phase than with the dispersed phase.

Therefore, claim 1 of the present invention is patentable over MICHAELS et al., and this reference fails to provide evidence a failing to define a contribution over the prior art.

As a result, KOCH et al. and MICHAELS et al. fail to provide evidence that Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT rule 13.2, they lack the same of corresponding special technical features, where "special technical features" is defined to mean those technical features that define a contribution over the prior art.

Therefore, rejoinder of the groups and species and examination of the entire claimed invention on the merits is respectfully requested.

Alternately, rejoinder upon indication of allowable subject matter is respectfully requested.

Conclusion

Early and favorable prosecution on the merits is respectfully requested.

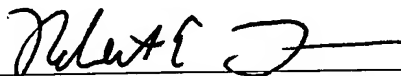
The Examiner is respectfully requested to consider the Information Disclosure Statement filed April 13, 2005 and to making an initialed PTO-1449 Form of record in the next Official Action.

Prior art of record but not utilized is believed to be non-pertinent to the instant claims.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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